



## **Geese and Local Economies in Scotland**

### **A Report to the National Goose Forum**

**by RSPB and BASC**

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## **A Report to the National Goose Forum by RSPB and BASC**

### **Executive Summary**

#### ***Introduction***

The Royal Society for the Protection of Birds (RSPB), in association with the British Association for Shooting and Conservation (BASC), was asked by the National Goose Forum to review available evidence of the benefits which geese bring to local economies in Scotland through tourism and shooting. This report presents the findings of this review.

#### ***Literature Review***

Published evidence of the benefits of geese to local economies is limited. However, a study of wildlife tourism on Islay suggests that winter birdwatching brought revenues of £180,000 to the island in 1988. This is equivalent to £270,000 in 1997 prices. Geese are the dominant winter birdwatching attraction on Islay. Total tourism expenditure related to the natural heritage in Scotland was estimated at £105 million in 1996.

Studies of the economic importance of sporting shooting in Scotland suggest that:

- 7,933 geese were shot in 1988/9, compared to 107,639 duck (excluding coastal wildfowl);
- 3,300 BASC members travelled to Scotland from other parts of the UK to shoot geese in 1988/9;
- total expenditure on sporting shooting in Scotland totalled £30.8 million in 1988/9, with other shooting-related expenditures estimated to total £47.2 million;
- in total, expenditures by shooters and providers supported 7,212 FTE jobs and income of £52.8 million in 1988/9;
- a more recent study suggests that the sporting shooting market has remained stable, or declined slightly in real terms, since 1988/9.

#### ***Survey of Tourist Boards and LECs***

A survey of tourist boards and local enterprise companies provided little new information but revealed a general recognition that geese are of significant benefit to the tourism industry in parts of Scotland, most notably the Argyll and the Islands and Dumfries and Galloway Tourist Board/LEC areas.

#### ***Survey of Goose Guides***

A BASC survey of goose guides in Scotland during April and May 1998 estimated that:

- a total of 4,150 clients were accompanied by goose guides in Scotland in 1997/8;
- these clients stayed in Scotland for 14,500 days and shot geese on 10,000 days;
- only 1% of paying clients were Scottish - 60% came from other parts of the UK, 35% from Europe and 4% from the rest of the world;
- goose shooters spent over £2 million in local economies in 1997/8 - £535,000 on accommodation, £508,000 on goose shooting, £829,000 on other shooting and £217,000 on other items;
- although most goose shooters also partake in other types of shooting during their stay, 93.5% visit Scotland specifically to shoot geese;

- Goose guides make annual payments of £200,000 to farmers for access to shooting, as well as providing other benefits such as crop protection.

### ***Coastal Wildfowling***

Using data collected by BASC, it is estimated that:

- at least 4,669 days of coastal wildfowling took place in Scotland in 1996/7, divided roughly equally between permit and non permit sites;
- shooting is normally available free of charge and is usually unaccompanied;
- coastal wildfowling spend a total of £184,000 per year in local economies in Scotland, of which £114,000 is spent on accommodation and £70,000 on other items;
- geese are the key species sought by visiting coastal wildfowling. These expenditures can therefore be largely attributed to the presence of geese at these sites.

### ***Goose Watching***

From a survey of wardens and managers of key reserves, it is estimated that:

- at least 25,000 staying visitors and 19,000 day trippers visit key goose reserves in Scotland each winter;
- these visitors spend an estimated £3.0 million in local economies;
- allowing for visitors' other activities and interests, it is estimated that 50% of this expenditure, or £1.5 million, can be attributed to the presence of geese at these sites;
- key sites are Vane Farm (Tayside), Caerlaverock/Mersehead/Ken and Dee Marshes (Dumfries and Galloway), Islay (Argyll), Nigg and Udale Bays (Cromarty) and Loch of Strathbeg (Grampian).

### ***Economic Impact of Goose Watching and Shooting***

**In total, we estimate that bird watchers and goose shooters spend a total of £5.4 million per year in local economies around Scottish goose sites. Of this, approximately £3.6 million can be attributed to the presence of geese themselves. Most of this expenditure is by non Scottish visitors, and provides an injection of spending into the Scottish economy. Using income and employment multipliers derived from the Scottish Tourism Multiplier Study, we estimate that these expenditures support employment totalling more than 100 FTE jobs and income of £1.1 million in local economies. We estimate that 53% of this employment and income is supported by inland goose shooting, 42% by goose watching and 5% by coastal wildfowling. It is important to note, when comparing these impacts, that the expenditure estimates were calculated using slightly different methods and assumptions.**

### ***Conclusions***

This report demonstrates that geese bring significant benefits to rural economies in Scotland by attracting winter tourism by bird watchers and shooters. These economic benefits are likely to be significant in comparison to estimates of the damage caused by goose grazing. For example, on Islay, where goose grazing is seen as being particularly damaging to the agricultural economy, SNH has estimated that it reduces farmers' gross margins by between £336,973 and £787,733 per year outside the SSSI area. Our estimates suggest that goose watching brings expenditures of between £269,000 and £346,000 to Islay's economy. While these figures are not strictly comparable, they suggest that any economic assessment which ignores the benefits of geese through tourism could seriously overstate the net damage geese are causing to the economy as a whole. While farmers suffer income losses from goose grazing, the economic benefits are usually enjoyed by the wider rural economy - such as providers of accommodation, food and drink, transport and other services. Most farmers find it impractical to charge visitors for access to the countryside to view wildlife, even in areas where goose watching is most popular, such as Islay and the Solway. Moreover, though many farmers do gain revenues from allowing people to shoot geese on their land, these do not necessarily reflect the costs which

individual farmers incur as a result of goose grazing. As a result, the benefits which geese bring to local economies are often not captured by those who bear the burden of the costs. This market failure supports the case for intervention to ensure that farmers are rewarded appropriately for managing their land in a way which supports healthy goose populations.

# 1. Introduction

## ***Background***

Increasing populations of geese in Scotland are causing growing levels of damage to agriculture. This damage has prompted the Government to introduce several goose management schemes, in order to manage the problem and compensate farmers for losses. This damage, and the expense of operating goose management schemes, has raised concerns about the economic costs of goose conservation. However, geese also bring substantial economic benefits to the areas around key roosting and feeding sites, by attracting the attention of birdwatchers and shooters who spend money in local economies. These economic benefits tend to be less well understood and to attract less publicity than the costs of goose grazing.

The Royal Society for the Protection of Birds (RSPB), in association with the British Association for Shooting and Conservation (BASC), was asked by the National Goose Forum to review available evidence of the benefits which geese bring to local economies in Scotland through tourism and shooting. This report presents the findings of this review.

## ***Methods***

The subject of the benefits which geese bring to local economies is a rather specialised one, which has received relatively little attention to date. As a result, existing literature on the subject is limited and fragmented. As well as reviewing relevant studies, we have therefore undertaken some basic survey work to gather information on visitor numbers and expenditures. This has included:

- a survey of wardens and managers of key nature reserves frequented by geese;
- a survey of guides accompanying inland goose shooters;
- a survey of records of shooting permits for key sites;
- a survey of Tourist Boards and LECs throughout Scotland.

This has enabled us to estimate the overall scale and economic impact of tourism due to goose shooting and watching in Scotland.

# 2. Geese and Local Economies

## ***Geese as an Attraction for Winter Birdwatchers***

Scotland offers outstanding birdwatching for visitors throughout the year. In the spring and summer, key attractions include the many large seabird colonies, as well as upland and woodland habitats. In winter, most birdwatchers focus on Scotland's wintering waterfowl and waders.

Wildlife tourism is now recognised as an important and growing sector of Scotland's tourism market. There have been few attempts to quantify the wildlife tourism sector across Scotland as a whole. However, one study estimated that expenditures attributable to visits to 149 Scottish wildlife sites in the early 1990s totalled £30 million per year, supporting an estimated 1,200 FTE jobs (Crabtree *et al*, 1992). A more recent report for SNH, "Jobs and the Natural Heritage in Scotland", estimated that tourism expenditures related to Scotland's natural heritage totalled £105 million in 1996 (MacKay Consultants, 1997).

Tourism is an important sector of the Scottish economy but is highly seasonal. As a result, unemployment rises in many areas during the winter months. Wildlife, and particularly birds, offer year round interest to visitors, and play an important role in extending the tourism season into the winter and "shoulder"(late autumn and early spring) months.

Geese are a key component of Scotland's winter birdwatching experience, presenting an impressive wildlife spectacle in many areas. In many parts of Scotland visitors are able to enjoy large numbers of greylags and pinkfeet, while some sites hold internationally important populations of rarer species such as barnacles and Greenland white-fronts. In some areas, such as Islay, geese are the predominant attraction for winter birdwatchers, while in others, such as Grampian, they form an important part of a wider birdwatching experience.

### ***Goose Shooting***

Shooting is also important to the Scottish economy. Total expenditures by shooters in Scotland were estimated at £78 million in 1989, supporting 7,212 FTE jobs (McGilvray et al, 1990). As with birdwatching, geese play an important role in attracting winter shooting parties to Scotland, helping to extend the tourism season. The main species shot are greylags and pinkfeet. An estimated 30,000 geese were shot in Great Britain in 1995.

Goose shooting can be divided into two main types of activity:

- Inland Goose Shooting. Typically this is organised by goose guides who secure rights to shoot geese from local farmers and accompany paying clients. Many of these clients are overseas parties of shooters. Clients often also shoot other game during these trips;
- Coastal Wildfowling. This is dominated by British wildfowling - both those who live in Scotland and those who travel to Scotland to take advantage of the public right to recreation, including wildfowling, on the foreshore. A small number of sites require permits, and these tend to be among the most popular wildfowling locations. These permits are free of charge (apart from one or two sites) and, since shooting is normally unaccompanied, costs tend to be lower than for inland goose shooting.

In general, inland goose shooting participants tend to spend more on their shooting trips than coastal wildfowling.

## **3. Review of Key Studies**

### System Three Scotland (1988): Survey of Visitors to Islay and Jura

This report, commissioned by the RSPB and others, reported a survey of visitors to Islay and Jura. Islay and Jura are islands with high unemployment rates where potential conflicts between nature conservation and economic development have been identified. The survey found evidence that wildlife, and especially birds, were attracting increasing numbers of visitors to Islay, particularly in the winter and "shoulder" months. Wildlife tourism was found to be particularly important in the first and last quarters of the year, when people visited Islay to watch the large flocks of wintering barnacle and Greenland white-fronted geese.

The study estimated that, in 1988, average expenditure per party was £313 for ferry visitors and £344 for air visitors; expenditure per day was £69.40 for ferry visitors and £67.45 for air visitors. Since average party size was not given, it was not possible to estimate expenditure per person and therefore total annual expenditure. The survey found that much of the appeal of Islay and Jura was their unspoilt nature, with visitors expressing no desire to see new development. This



suggests that the maintenance of the existing tourism industry on the islands is dependent on preserving their natural features.

MacKay Consultants (1989): Islay and Jura Tourism Impact Study

MacKay Consultants undertook a follow up to the System 3 study. A total of 28,770 tourists were estimated to have visited the islands in 1988, with 25,945 (90%) of these carried by ferry and the remainder by plane. The visitor expenditure figures found by the System 3 study could not be used as they did not define party size, nor did they exclude travel expenditures outside the islands. A range of similar studies were examined, and it was concluded that likely levels of expenditure would be around £20 per day for visitors staying on the islands, with an average stay of 6.1-6.2 nights, and £10 per day for day trippers.

'Wildlife' was an important element in the decision to visit for 93 per cent of the 28,770 tourists who went to these islands in 1988. The report estimated that expenditure amounted to £3.1 million for all visitors, of which £342,000 related to wildlife enthusiasts, a further £986,000 to visitors with an active wildlife interest, and £1.7 million to other visitors with a strong wildlife interest (Table 1).

**Table 1: The Contribution of Wildlife Tourism on Islay and Jura 1988**

	<b>Number of tourists</b>	<b>%</b>	<b>Annual Spending (£)</b>
All tourists	28,770	100	3,101,156
Wildlife enthusiasts	2,877	10	342,156
Holiday makers with an active interest in wildlife	8,631	30	986,944
Holiday makers with a strong interest in wildlife	15,248	53	1,727,306

Using a direct expenditure: employment ratio of £25,000 per FTE job, and assuming that a quarter of an indirect job is supported per direct job, the study estimated that the total employment impact of visitor expenditure was 155 FTE jobs (all holiday-makers), of which 17 were supported by wildlife enthusiasts, and a further 49 by active wildlife visitors and 86 by visitors with a strong wildlife interest. Much of this employment was considered to be seasonal, or to increase the activity of people already in employment (e.g. owners of self-catering accommodation with jobs elsewhere in the local economy). However, because of the importance of winter bird-watching in Islay and Jura, the seasonal nature of this employment is less marked than in most areas.

Discussion and Update of Islay/Jura Tourism Studies

The System 3 survey found that 17% of ferry visitors arrived in January to March and 18% in October-December. Of these, 21% of visitors in January-March and 13% in October-December stated that bird watching was one of their main activities. From this, it is estimated that 5.9% of holiday visitors to Islay in 1988 were winter bird watchers. Assuming that average spending for these visitors was the same as for other visitors, winter bird watchers spent around £180,000 in 1988. Most or all of this spending is likely to be attributable to the presence of geese on Islay.

It is possible to update this estimate to take account of inflation. Between 1988 and 1997 the Retail Price Index increased by 49.5%. The 1988 estimate of expenditures by winter birdwatchers is therefore equivalent to £269,000 in 1997 prices. In practice, there has been significant and widespread growth in the wildlife tourism sector in the last decade, so this figure may well be an underestimate.

The value of wildlife related tourism on Islay is therefore significant compared to estimates of the damage caused by geese, which SNH has put at between £336,973 and £787,733 per year outside the SSSI area. This suggests that economic assessments which ignore the benefits of geese through tourism could seriously overstate the net damage geese are causing to the economy as a whole.

While farmers suffer income losses from goose grazing, the economic benefits are usually enjoyed by the wider rural economy - such as providers of accommodation, food and drink, transport and other services. Most farmers find it impractical to charge visitors for access to the countryside to view wildlife. As a result, the benefits which geese bring are not captured by those who bear the burden of the costs. This market failure supports the case for intervention to ensure that farmers are rewarded appropriately for managing their land in a way which supports healthy goose populations.

McGilvray et al (1990): Economic Impact of Sporting Shooting in Scotland

This study was commissioned by BASC and the then Scottish Development Agency and carried out by the Fraser of Allander Institute, in order to estimate the economic impact of sporting shooting in Scotland. The study sought to evaluate the economic impact of sporting shooting, including its impact on incomes, output and employment; to assess its contribution to conservation, recreation and countryside management; and to identify issues of importance to the future development of sporting shooting and its role in Scotland’s rural economy. The study included grouse, lowland game, rough and inland duck and goose shooting, deer stalking and coastal wildfowling. Given the absence of published information on the subject, the study involved extensive survey work, principally by means of postal questionnaires, supplemented by fieldwork and interviews. Most effort was directed towards the providers of sporting shooting rather than consumers, although a separate survey of wildfowlers was conducted because they would not be fully captured by the providers’ survey.

The survey estimated the average annual expenditures by different groups of participants on both shooting and on other goods and services such as accommodation, food and drink, ammunition and other accessories, gifts and other items (Table 2). Expenditures for wildfowlers were estimated separately from those of other participants. It is understood that “wildfowlers” here refers mainly to coastal wildfowlers, while inland goose shooters are included with other participants, although there may have been some problems in distinguishing between these two groups. Inland goose shooting was not as significant in economic terms in 1989 as it is now. The figures reveal that coastal wildfowlers on average pay significantly less for their shooting than other participants, but that their expenditures in the wider economy are comparable.

**Table 2: Average Expenditure by Participants in 12 Month Period (1989)**

	<b>Sporting Shooting (£)</b>	<b>Other Expenditure (£)</b>	<b>Total (£)</b>
Scottish Participants	378.2	977.5	1,355.7
Rest of UK Participants	657.4	731.1	1,388.5
Rest of world participants	733.8	845.3	1,579.1
Scottish wildfowlers*	69.6	956.6	1,026.2
Rest of UK wildfowlers*	196.2	462.1	658.3

*\* Mainly coastal wildfowlers, but may include some inland goose shooters*

The providers survey estimated that - excluding coastal wildfowl - 7,933 geese were shot in 1988/9, compared to 107,639 duck. A total of 15,284 days of shooting were organised for geese, duck, woodcock, snipe, pigeon, rabbit and hare, out of a total of 60,664 days of organised shooting in Scotland in 1988/9. The study estimated that 19,000 Scottish people spent an average of 5.5 days per year wildfowling. Furthermore, a survey of BASC members revealed that 3,300 travelled to Scotland each year from other parts of the UK to shoot geese. Including non BASC members and duck shooters, it was estimated that 5,000 residents of other parts of the UK go wildfowling in Scotland each year.

**Table 3: Estimated Total Expenditure by Participants in 12 Month Period (1989)**

	<b>Sporting Shooting (£ million)</b>	<b>Other Expenditure (£ million)</b>	<b>Total (£ million)</b>
Scottish Participants	6.4	16.5	22.9
Rest of UK Participants	14.7	16.4	31.1
Rest of world participants	8.5	9.8	18.3
Scottish wildfowlers*	0.2	2.2	2.4
Rest of UK wildfowlers*	1.0	2.3	3.3
<b>Total</b>	<b>30.8</b>	<b>47.2</b>	<b>78.0</b>

\* *Mainly coastal wildfowlers. Figures exclude expenditure on shotguns.*

Total expenditure on shooting was put at £30.8 million, with other shooting-related expenditures estimated to total £47.2 million (Table 3). Wildfowlers were estimated to spend a total of £1.2 million per year on shooting, and a further £2.3 million per year on other goods and services.

It is important to note that these are overall expenditure figures and include expenditures away from shooting areas. For example, the figures for Scottish participants and wildfowlers cover all shooting-related expenditures, including money spent on equipment, dogs and journals, much of which will be made before embarking on shooting trips. The figures for non-Scottish shooters include spending outside Scotland on travel and fees to agents. As a result, the figures estimate overall levels of spending associated with shooting in Scotland, but do not give an indication of the impact on local economies around goose sites.

These expenditures were estimated to support direct employment of 2,411 FTE jobs and income of £11.4 million to providers of sporting shooting. Using input-output tables, it was estimated that purchases by providers of sporting shooting generated a further 1,908 jobs and £16.6 million income in the Scottish economy. In addition, other expenditures by participants generated some 2,893 FTE jobs and £24.9 million in income, giving a total employment impact of 7,212 FTE jobs and total income of £52.8 million.

#### Segal Quince Wicksteed (1995) Sporting Shooting in Scotland

This study was commissioned by the Scottish Tourist Board and the British Association for Shooting and Conservation. It aimed to identify current perceptions of the shooting industry in Scotland, consider its strengths and weaknesses, identify development opportunities and suggest means of overcoming constraints to development. As a secondary aim, the consultants were asked to consider any changes in the market and the economic importance of the sector since the Fraser of Allander Institute study. The study involved a questionnaire survey and a series of consultations.

The study concluded that there was little to suggest that the overall shooting market had grown in real terms since the FAI study, and that there was some evidence of a decline. A key factor limiting demand was the perceived high cost of shooting in Scotland, and evidence was found of increasing competition from other countries, particularly in Central and Eastern Europe. A slight decline was identified in the number of trips for inland goose and duck shooting and coastal wildfowling, although a small increase in the average length of trips was noted.

#### Cobham Resource Consultants (1997) : Countryside Sports - Their Economic, Social and Conservation Significance

This study reviewed the economic and conservation significance of countryside sports, updating earlier reports published in 1983 and 1992. It was based on a review of published information relating to hunting, shooting and fishing. It estimated that:

- direct expenditures by providers and participants in sporting shooting in Scotland total £41 million per year;
- British tourists participating in hunting, shooting and stalking bring revenues of £9.7 million per year into the Scottish economy;
- countryside sports are important in maintaining rural employment and populations in Scotland;
- an estimated 30,000 geese were shot in Great Britain in 1995;
- Shooting provides 12,000-12,600 direct FTE jobs in Great Britain, with a further 14,000 FTE jobs in associated trades and services;
- direct employment generated by game fishing, shooting and stalking in Scotland totals 2,950 FTE jobs.

Unfortunately, because of the broad nature of this study, the figures do not give an indication of the economic significance of goose shooting in Scotland.

## **4. Survey of Tourist Boards and LECs**

### ***Introduction***

We wrote to the Scottish Tourist Board, Area Tourist Boards, Scottish Enterprise, Highlands and Islands Enterprise and the Local Enterprise Companies and Development Agencies to ask them for any information they had about the importance of geese for tourism and shooting. A copy of the letter is included in Appendix 1.

We received 9 replies from tourist boards and 14 replies from LECs and development agencies. The responses received from these organisations are summarised in Appendix 2, and our conclusions are set out below.

### ***Conclusions from Tourist Board and LEC Responses***

The survey of LECs and tourist boards provided little new information, and is not of much assistance in helping to quantify the impact of goose related tourism on local economies in Scotland. However, many of the responses revealed a general recognition that geese are of significant benefit to the tourism industry in parts of Scotland, most notably the Argyll and the Islands and Dumfries and Galloway Tourist Board/LEC areas. In several other parts of Scotland, the economic importance of wildlife tourism in general was highlighted. The survey indicates that the importance of wildlife, and specifically geese, to the tourism industry is recognised not only by conservation and shooting interests but also by Tourist Boards and Local Enterprise Companies.

## 5. Survey of Goose Guides

### *Introduction*

BASC conducted a survey of goose guides in Scotland during April and May 1998, in order to estimate the economic impact of inland goose shooting. The survey asked goose guides to provide data on the number of clients they accompanied during the 1997/8 season, their length of stay and the number of days they spent shooting, and their expenditure on accommodation and shooting. The guides were also asked to indicate the importance of goose shooting (rather than other factors or other forms of shooting) in attracting clients to stay in the area, and whether or not 1997/8 was a typical season. The questionnaire used is included in Appendix 3. The results were used to assess the economic impact of goose shooting in Scotland.

### *Survey results*

Replies were received from 14 goose guides, out of a total of 42 known goose guides in Scotland. Although the sample is small, it represents one third of all the goose guides in Scotland. Individual goose guides were classified as small, medium and large according to their numbers of clients in 1997/98 (Table 4). Stratification by size of business helps to reduce bias in the sample resulting from the higher response rate from guides with more clients.

**Table 4: Breakdown of Providers of Goose Shooting in Scotland, and Survey Respondents**

Category	Number of Clients	Number of Guides in Scotland	Number of Respondents
Small	1-50	16	4
Medium	51-149	12	3
Large	150+	14	7
<b>Total</b>		<b>42</b>	<b>14</b>

As the total number of guides in each category operating in Scotland is known, it is possible to estimate the total number of shooting clients accompanied by goose guides in Scotland in 1997/8 (Table 5). The responding guides accompanied a total of 1,690 clients in 1997/8, and the total number of clients in Scotland is estimated to be 4,150 in that year.

**Table 5: Estimated Number of Clients in Scotland**

Category	Total Clients	Mean Number of Clients per Guide	Total Guides in Scotland	Estimated Total Clients in Scotland
Small	107	26.7	16	428
Medium	278	92.7	12	1,112
Large	1,305	186.4	14	2,610
<b>Total</b>	<b>1,690</b>		<b>42</b>	<b>4,150</b>

Each guide was asked to estimate the average length of time clients spent in the area and the average number of days spent shooting geese. By multiplying these figures by the estimated totals of clients in Scotland, it was possible to estimate the total number of days spent staying and shooting in Scotland in 1997/8. Results are given in Table 6. We estimate that shooting clients accompanied by goose guides spent more than 10,000 days shooting geese in Scotland in 1997/8, out of a total stay of more than 14,500 days.

**Table 6: Length of Stay and Time Spent Shooting Geese**

Category	Average length of stay (days)	Average days spent shooting geese	Total days stay in Scotland	Total days shooting geese in Scotland
Small	4.76	2.19	2,037	937
Medium	3.92	2.14	4,359	2,380
Large	3.11	2.59	8,117	6,760
<b>Total</b>			<b>14,513</b>	<b>10,077</b>

Only one in one hundred of the clients of the guides responding to the survey were Scottish. (It is recognised that those resident in Scotland, and interested in inland goose shooting, tend to make direct arrangements with farmers and landowners. Frequently, such permission to shoot is given as part of wider sporting rights or in return for the benefits of scaring and control.) Sixty per cent of all clients in the sample in 1997/8 came from other parts of the UK, and a further 35% from the rest of Europe. European clients provided the bulk of the business for the small and medium sized goose guide businesses responding to the survey (Table 7).

**Table 7: Country of Origin of Shooting Clients**

Category	Scotland (%)	Rest of UK (%)	Europe (%)	Rest of World (%)
Small	3	36	60	2
Medium	3	24	71	2
Large	1	70	25	5
<b>Total Sample</b>	<b>1</b>	<b>60</b>	<b>35</b>	<b>4</b>

Table 8 shows the types of accommodation used by clients. Most clients stay in hotel accommodation, with the next largest percentage staying with the goose guides themselves. The table shows a difference in the types of accommodation used by small, medium and large scale providers in our sample - with bed and breakfast being important in the small scale category, while more goose guides in the medium and large categories provided accommodation themselves. Overall, hotel accommodation was used by the majority of clients. However, caution is needed in interpreting these results because of the small sample involved.

**Table 8: Types of Accommodation Used**

Category	B&B (%)	Hotel (%)	Self Catering (%)	Stay with Goose Guide (%)	Day Trip/ Other (%)
Small	45	50	0	0	6
Medium	0	60	0	34	6
Large	1	67	0	31	0
<b>Total</b>	<b>4</b>	<b>65</b>	<b>0</b>	<b>29</b>	<b>2</b>

According to the guides responding to the survey, clients spent an average of £35 per night on accommodation in 1997/8. Total expenditure on accommodation by goose shooting clients is estimated at £535,000 for that year (Table 9).



**Table 9: Estimated Expenditure on Accommodation**

Category	Average spend per night (£)	Average spend per guide (£)	Estimated expenditure in Scotland
Small	40.9	5,210	83,360
Medium	44.3	16,091	193,092
Large	31.8	18,470	258,580
<b>Total</b>			<b>535,032</b>

Goose guides secured payments averaging £12,115 per guide from their clients for providing goose shooting. Most clients also took part in other types of shooting during their stay in the area, spending an average of £19,754 per guide. It is estimated that clients paid guides in Scotland a total of £1.3 million for their shooting in 1997/8. This total includes expenditure on goose and other shooting (Table 10).

**Table 10: Estimated Expenditure on Shooting \***

Category	Spend on Goose Shooting (£/guide)	Total Spend on Goose Shooting (Scotland, £)	Spend on Other Shooting (£/guide)	Total Spend on Other Shooting (Scotland, £)	Total Shooting Expenditure (Scotland, £)
Small	3,305	52,880	10,762	172,192	225,072
Medium	13,346	160,152	29,947	359,364	519,516
Large	21,128	295,792	21,295	298,130	593,922
<b>Total</b>		<b>508,824</b>		<b>829,686</b>	<b>1,338,510</b>

\* These are payments to goose guides for shooting only, and exclude accommodation and other expenses

Guides were asked to estimate what proportion of clients visit their area specifically to shoot geese, rather than being attracted by other types of shooting or being in the area for other reasons. Guides estimated that, overall, 93.5% of clients were attracted to the area primarily to shoot geese (Table 11).

**Table 11: Proportion of Clients Coming Specifically to Shoot Geese**

Category	Clients visiting specifically to shoot geese (%)
Small	96.2
Medium	95.0
Large	93.0
<b>Total</b>	<b>93.5</b>

These results appear to demonstrate that geese are the main attraction to shooting clients, but that, when staying in the area, these visitors spend more on other types of shooting. This is because most guides adhere to BASC's Code of Practice for Inland Goose Shooting, which recommends that goose shooting should stop two hours after sunrise. This leaves clients with the rest of the day to enjoy other forms of shooting, such as rough shooting and duck flighting.

The majority of guides responding to the survey made payments to farmers in return for permission to accompany shooting clients onto their land. Farmers also receive benefits in



terms of crop protection. Payments to farmers are estimated to total over £200,000 per year in Scotland, averaging £4,825 per guide (Table 12).

**Table 12: Payments to Farmers by Goose Guides**

<b>Category</b>	<b>Average Payment per Guide (£)</b>	<b>Estimated Total in Scotland (£)</b>
Small	1,786	28,576
Medium	9,107	109,284
Large	4,627	64,778
<b>Total</b>		<b>202,638</b>

No data are available for expenditures on items other than accommodation and payments to guides. However, clients also spend money on a range of different goods and services such as food and drink, travel, entertainment and equipment. Using a conservative estimate of £15 per day, expenditure on these other items was likely total at least £217,000 in 1997/8.

Summing expenditures on accommodation, shooting and other items, it is estimated that shooting clients using the services of goose guides spent a total of at least £2.0 million in Scotland in 1997/8 (Table 13). Assuming that 93.5% of this spending can be attributed to the presence of geese themselves, it is estimated that geese bring at least £1.95 million of spending into local economies in Scotland. Around 99% of this expenditure comes from outside Scotland.

**Table 13: Estimated Spending by Goose Shooting Clients in Scotland, 1997/8**

	<b>Total Expenditure (£)</b>	<b>Expenditure Attributable to Geese (£)</b>
Accommodation	535,032	500,255
Goose Shooting	508,824	475,750
Other Shooting	829,686	775,756
Other expenditures	217,695	203,545
<b>Total</b>	<b>2,091,237</b>	<b>1,955,306</b>

These estimates are considered conservative because:

- in the absence of hard information, conservative estimates for “other expenditures” have been used;
- the data relate only to shooting clients, and exclude any expenditures on behalf of wives and families.

Guides were asked whether they considered business in 1997/8 to be a good, average or poor relative to recent seasons. Half of the 14 respondents considered that 1997/8 was an average season, with 5 describing it as poor and one as good (Table 14). Four respondents expected business to improve in 1998/9, and one for it to deteriorate (Table 15).

**Table 14: Comments on Business in 1997/8**

<b>Comment on 97/8 season</b>	<b>Number of respondents</b>
Good	1
Average	7

Poor	5
New business	1
<b>Total</b>	<b>14</b>

**Table 15: Expectations of 1998/9 Season**

<b>Expectations of 98/9 season</b>	<b>Number of respondents</b>
Should be better	4
May be worse	1
No change/no opinion	9
<b>Total</b>	<b>14</b>

## **6. Data on Coastal Wildfowling**

### ***Introduction***

Coastal wildfowling takes place between September and February 20. Permits are generally available cheaply or free of charge. Participants tend to have a more limited budget than inland goose shooters.

BASC has collected data on the number of coastal wildfowling in Scotland, by means of a survey of records from permit sites in 1996/7, and by collecting estimates of activity at other, non permit sites. These data are summarised below.

### ***Permit Sites***

**Table 16: Wildfowling Permits - Eden Estuary**

	<b>Issued</b>	<b>Used</b>	<b>Average No. of Visits (days)</b>	<b>Total Visits (days)</b>
Total permits issued	277			
Local (St Andrews, Fife, Tayside)	105	59	5.7	336
Other Scotland	48	12	3	36
England and Wales	93	34	4.1	139

The Eden Estuary is used very much as a stop-over by wildfowling. Their use of their permits depends very much on the quality of wildfowling available at the time.

**Table 17: Wildfowling Permits - John Muir**

	<b>Issued</b>	<b>Used</b>	<b>Average No. of Visits (days)</b>	<b>Total Visits (days)</b>
Total permits issued	235			
Local (Lothians,	145	80	9.5	760

Edinburgh, Borders)				
Other Scotland	10	10	7.5	75
England and Wales	80	36	3.8	137

**Table 18: Wildfowling Permits - Montrose**

	Issued	Used	Average No. of Visits (days)	Total Visits (days)
Total permits issued	239			
Local (Angus)	107	93	-	-
Other Scotland	6	6	4	24
England and Wales	126	126	4	504

**Table 19: Wildfowling Permits - Caerlaverock**

	Issued	Used	Average No. of Visits (days)	Total Visits (days)
Total permits issued	208			
Local (around Dumfries)	63	49	7.9	387
Other Scotland	7*	7*	3.8	27
England and Wales	138*	100*	3.8	308

*\*Estimated figure, due to inconsistency in recording of results through differing permit systems*

**Table 20: Wildfowling Permits - Wigtown**

	Issued	Used	Average No. of Visits (days)	Total Visits (days)
Total permits issued	299			
Local (DG11, DG12)	50	50	-	?
Other Scotland	2	2*	4	8
England and Wales	247	247*	3.8	939

*\*Estimated figure, due to inconsistency in recording of results through differing permit systems*

### **Non-Permit Sites**

Estimates of the number and length of visitors to non permit sites are given in Table 21. These estimates should be treated with caution, as information on visits to non permit sites is limited.

**Table 21: Estimated Visitor Numbers to Selected Non-Permit Sites**

Site	Avg. visiting wildfowlers/ week	Weeks per year	Average wildfowlers/ year	Average stay (nights)	Accommodation used
Findhorn	8	20	160	4	65%B&B; 30% hotel; 4% self catering; 1% car/lorry
Beaully, Cromarty, Dornoch	16	20	320	4	75%B&B; 20% hotel; 4% self catering; 1% car/lorry
Tay	6	20	120	4	75%B&B; 20% hotel; 4% self catering; 1% car/lorry
<b>Total</b>	<b>30</b>	<b>20</b>	<b>600</b>	<b>4</b>	

***Estimated expenditures****Permit Sites***Table 22: Summary of Visiting Coastal Wildfowlers at Permit Sites**

	English/Welsh	Scottish (non locals)	Total
Number of wildfowlers using permits	543	37	580
Average number of days	3.87	4.58	3.91
<b>Total days</b>	<b>2,099</b>	<b>170</b>	<b>2,269</b>

Around 50% of visits by Scottish wildfowlers are day trips. The majority of staying visitors use guest houses and bed and breakfast accommodation, with some staying in hotels, self catering accommodation, caravans or their vehicles.

*Non-Permit Sites*

From the estimates above, at least 600 visiting wildfowlers spent 3-4 days wildfowling at non-permit sites in 1996/7, staying for an average of 4 nights each. It is estimated that around 75% of these stayed in B&B accommodation, 20% in hotels and the remainder in self catering or their own vehicles.

*Estimated Expenditure*

Using the data on the average cost of different types of accommodation from the goose guides survey, combined with estimates of the proportion of coastal wildfowlers staying in different types of accommodation, it is estimated that coastal wildfowlers spend £25 per night on accommodation. Examining the results of a range of other Scottish visitor surveys, we estimate that staying visitors are likely to spend an average of £15 per day on other items, and that day trippers spend an average of £10 on all items. Using these estimates of daily expenditure, it is estimated that coastal wildfowlers using permit sites spend around £88,000 per year in local economies, and that those using non permit sites spend £96,000 per year (Table 23).



**Table 23: Estimated Expenditures by Coastal Wildfowling**

	<b>Visitor days</b>	<b>Accomm. (£/day)</b>	<b>Other spend (£/day)</b>	<b>Total Accomm. Spend (£)</b>	<b>Total other spend (£)</b>	<b>Total spend (£)</b>
<b>Permit Sites</b>						
English/Welsh visitors	2099	25	15	52,475	31,485	83,960
Scottish day-trippers	85	-	10	-	850	850
Scottish staying visitors	85	25	15	2,125	1,275	3,400
Total	2269			54,600	33,610	88,210
<b>Non Permit Sites</b>	2400	25	15	60,000	36,000	96,000
<b>Total</b>	<b>4,669</b>			<b>114,600</b>	<b>69,610</b>	<b>184,210</b>

Because the vast majority of these trips concentrate solely on coastal wildfowling, it seems safe to attribute all of these expenditures to coastal wildfowling itself. Since geese are the key quarry species at the sites in question, it is not unreasonable to attribute these expenditures to the presence of geese at these sites.

## **7. Survey of Wardens/Managers of Goose Sites**

### ***Introduction***

Questionnaires were sent to wardens and managers of key reserves in Scotland supporting important wintering populations of geese, and receiving significant numbers of visitors. The questionnaires asked each reserve to estimate the number of visitors during the winter months, the importance of geese as an attraction to visitors, and the types of visitors (locals, day-trippers and holidaymakers). Respondents were also asked about the number of people shooting in the area around the reserve, and were asked to provide general information about geese and the local economy. A copy of the questionnaire is provided in Appendix 4.

### ***Loch Gruinart, Islay***

The reserve supports 6,000 barnacle and 800 Greenland white-fronted geese between October and April, as well as other wildfowl and waders and species such as hen harrier, corncrake and chough. It receives 6,500 visitors per year, of whom around 40% (2,600) visit during winter. Geese are the main visitor attraction during this time. Most visitors (95%) are on holiday, typically staying for a week or more on Islay. No geese are shot for sport on Islay. The warden considers geese to be an important visitor attraction in autumn, winter and spring, helping to extend the tourism season. Two reports on wildlife tourism on Islay, written in the late 1980s, are summarised in section 3 of this report.

### ***Vane Farm***

The reserve supports up to eight species of geese, predominantly pinkfeet and greylags, present between September and the first week of May. The reserve also has breeding waders and wintering ducks. Of the 56,000 annual visitors, 40,000 visit while the geese are present. The geese are considered to be a major attraction (but not the only attraction) during this period. Of these visitors, it is estimated that 50% live within 10 miles of the reserve, 26% are day trippers

and 24% are holiday-makers. The reserve attracts many visitors to stay in the area, typically for between 2 days and a week.

Shooting is also important in the area. An estimated 1,000 people per year shoot geese locally, with an estimated 80% of these being holidaymakers. Many people holiday in the area specially to shoot geese, typically staying for between one and two weeks.

### ***Loch of Strathbeg RSPB Reserve***

Between 1990 and 1995 Strathbeg had an average wintering population of 40,000 pinkfeet, 1,500 greylags, 365 barnacles and 8 white-fronted geese. On average geese are present on the reserve between late September and the second week of May, depending on weather conditions. Strathbeg also provides habitat for waders, waterfowl, otters and wild flowers.

Between 10,000 and 12,000 people visit the reserve each year, with around 60-70% visiting while geese are present. Geese are considered an important attraction for visitors, but not the main or only attraction. Approximately 45% of visitors are locals, 45% are day-trippers and 10% are holiday makers. Most visitors tend to be passing through the area, although some stay all day.

The area around Strathbeg has historically been a great magnet for goose shooters, and therefore the geese are of great importance for the local economy. Shooters include a mixture of locals and staying visitors, including English and international (e.g. Italian) visitors. Goose shooters stay in the area for up to one week during the shooting season. Up to six goose guides provide goose shooting and use 3-4 local hotels and filling stations (for cartridges and petrol/diesel). Bed and breakfast establishments are also used to some extent.

### ***Other Grampian roosts***

As well as Strathbeg, Grampian has several other important roost sites for geese, including Dinnet, Skene, Meikle/Ythan, Haddo, Spynie and Findhorn Bay. These sites collectively receive many thousands of visitors, many of whom visit them to see geese. Some people visit Grampian in winter on holidays or short breaks, to see geese and other species. Geese are considered to be an important part of the winter birdwatching experience in Grampian, but not the only reason for birdwatchers to visit the area in winter. Goose shooting is also important in the area, with several hundred people shooting geese each year, many of whom are holidaymakers or day-trippers. Geese are thought to be important for winter tourism at a local level, particularly around the main roost sites, although their economic impact is likely to be small in relation to region's economy as a whole.

### ***WWT Caerlaverock***

Caerlaverock is managed by the Wildfowl and Wetlands Trust. It supports a wintering population of 13,000 barnacle (Svalbard race) and 2,000 pink-footed geese, which are present between September and May, as well as various ducks, swans, waders, raptors, owls and natterjack toads.

The reserve receives 16,000 visitors per year, of whom 12,000 visit during the months when geese are present. Geese are considered to be the main visitor attraction at these times. An estimated 70% of visitors are day trippers, 25% are holidaymakers and less than 5% are locals. Visitors staying in the area typically stop for two nights. People also visit the area to shoot geese, and it is estimated that 50% of shooters visit on holiday, 30% are day-trippers and 20% are locals.

### ***Mersehead Nature Reserve***

Mersehead is another reserve on the Solway, managed by the RSPB. It is visited daily by barnacle geese (Svalbard race) between October and April, and periodically by pinkfeet during the same period. The reserve also provides habitat for waders and farmland birds.

Mersehead currently attracts 2,500 visitors per year, and 1,500 visitors during the months when geese are present. However, the reserve has not been heavily promoted to date. This situation is set to change with the opening of a new visitor centre in Autumn 1998, funded under the Objective 5b programme, and accompanied by increased promotional activity and signposting. As a result, a tenfold increase in visitor numbers is expected in the near future.

Geese are considered an important (but not the only) attraction for visitors. An estimated 10% of visitors are locals, 35% are day trippers and 55% are holiday makers, often staying for 1-2 weeks in the area, with the reserve typically encouraging visitors to prolong their stay by 1-2 days. An estimated 15-20 members of a local club shoot geese on the foreshore. Half of these are locals, and the remainder are split between day trippers and holiday makers, who generally stay for one week.

Mersehead, like Caerlaverock, is now acknowledged as providing a major winter wildlife spectacle. Wildfowling on the Solway is also nationally recognised as being among the best in the UK. Birdwatching and shooting are considered to play a vital role in extending the traditional tourism season.

### ***Ken-Dee Marshes***

The Loch Ken/River Dee Marshes attract wintering Greenland white-fronted (400), greylag (1,100), pink-footed (600), barnacle (10) and Canada (90) geese. Most species are present between October and April, with small numbers of Canada and greylag geese staying to breed. The site is also good for raptors, ducks and passage ospreys and is located in a heavy pheasant rearing area.

Loch Ken receives around 50,000 visitors per year, of whom 3,000 visit the RSPB reserve, which covers only a small proportion of the Loch. Half of the visits to the reserve occur during the winter months. Geese are the main attraction for birdwatchers and shooters in winter, although many pheasant shooters also visit the area. About 5% of visitors to the RSPB reserve are locals, 55% are day-trippers and 40% are holiday-makers. For Loch Ken as a whole, these figures are 5%, 30% and 65% respectively.

The reserve is an important part of a network of excellent wildlife sites in the region, which attract birdwatchers on holidays and long weekends. Other sites on the circuit include Caerlaverock and the Galloway Hills.

About 200 people stay in the area each year to shoot geese (outside the reserve), typically for 3-7 days at a time. Two hotels specialise in shooting during the winter and several estates offering pheasant and rough shooting around Loch Ken. Mixed shooting - which includes flighting geese at dawn, is popular. The benefits tend to be enjoyed by a few hotels, bars and gun shops.

### ***Wigtown Bay***

Wigtown Bay attracts between 6,000 and 9,000 pinkfeet and 500 greylags between December and March/April each year, as well as a range of ducks and waders. About 500 individuals visit the site each year, many making repeat visits, and about 400 of these visit during the



months when geese are present. About 300 of these are goose shooters. Other than wildfowlers the site attracts a few fishermen and local dog walkers. Around 60% of all visitors, and 70% of shooters are on holiday in the area, typically staying for 3-7 days. Locals account for 20% of visitors and 10% of shooters.

Wigtown Bay is well known as a prime goose shooting site. Goose shooting is important for a few hotels and guides during the winter period, and helps to maintain two shooting shops in the local town. The site attracts very few birdwatchers at present, mainly because of the harsh terrain. However, a proposed visitor centre and reserve is expected to attract 10-20,000 visitors.

### ***Orkney***

Up to 13,000 greylag, 1,100 barnacle and 250 Greenland white-fronted geese winter on Orkney, staying between October and April, with around 100 pairs of greylags now breeding on the islands. There is a goose management scheme for barnacles on South Walls. Orkney also supports a wide range of other interesting bird and wildlife species.

Orkney receives around 120,000 visitors per year, but very few of these come in the winter months, and it is considered unlikely that many people visit Orkney to see geese. A small number of locals (estimated at about 25 people) shoot geese on Orkney. In addition, shooting parties visit Shapinsay for autumn and winter holidays and a hotel in West Mainland has recently also begun to offer shooting holidays. Visitors typically stay for 1-2 weeks. Italian shooting parties staying in West Mainland have provoked opposition from local people. However, shooting is becoming increasingly important to the local economy, helping to extend the tourism season into the winter months.

### ***Nigg and Udale Bays in Cromarty Firth***

This site supports an average population of 1,600 greylag geese and 750 pinkfeet, with numbers peaking at 5,000 greylags and 2,000 or more pinkfeet. Greylags are present between October and January and pinkfeet between March and April. Other species using the site are wigeon, and large numbers of waders.

Udale Bay attracts around 4,000 visitors per year, of whom 2,000 visit at times when geese are present. Geese are considered an important (but not the only) attraction for visitors. An estimated 50% of visitors are locals, 25% are day-trippers and 25% are on holiday. The reserve is thought to encourage some visitors to stay in the area, but is seen as one of the attractions of the area rather than a major attraction in its own right.

One hundred or more people shoot geese in the bay each year, with 65% of these thought to be locals and 35% holidaymakers, typically staying for one week. Goose shooting is considered to be very important to the local economy, encouraging people to stay in the area in winter - and is of more importance than birdwatching in this respect.

## **Scottish Wildlife Trust Reserves**

**Table 24: Scottish Wildlife Trust Reserves with Goose Interest**

<b>Name of Site</b>	<b>Designation</b>	<b>Goose species ( and number)</b>	<b>Visitors</b>	<b>Shooting?</b>
Loch of the Lowes	SPA/SAC/ SSSI	Greylag roost (5 yr. mean =1,264)	c. 30,000 per year. Most April-Sept. Few connected with geese	No
Stormont Loch	SPA/SSSI	Greylag (7,500 in area)	Mainly local dog walkers	Some
Southwick Coast	SPA/SAC/ SSSI	Feeding barnacles - most roost at Mersehead	Very few	No
Loch Fleet	SPA/NNR/ SSSI	Greylag - national importance for north Scottish popn (50% in September) and Icelandic (10% in December)	Popular year round, relatively high proportion of visits goose related	Some, increasing
Montrose Basin LNR	SPA/SSSI/ LNR	Pinkfeet (41,000 in November, 10-15,000 thereafter), greylag	c. 10,000 per year - for wildfowl, geese and waders	Yes
Balgavies Loch	SSSI	Greylag roost	Very few	No
Loch of Lintrathen	SPA/SSSI	Greylag roost (5 year average = 2,100)	Few	No
Hoselaw Loch	SPA/SSSI	Pinkfeet (5 year avg= 1,300), greylag (5 yr. avg. = 2,680)	Very few	Some?
Bermersyde Moss	SSSI	Increasing nos. of greylag, fewer pinkfeet	Small numbers	None?
Alloa Inches	SPA/SSSI	Roost/spring feeding for 2- 3,000 pinkfeet	No access	Some
Eigg		c5 pairs breeding greylag	c 5,000 per year - none due to geese	None

## **Summary of Visitor Data**

Numbers of visitors to key goose-watching sites are summarised in Table 25.

**Table 25: Summary of Reserves Attracting Goose Related Birdwatching**

	<b>Total visitors</b>	<b>Winter visitors</b>	<b>Staying visitors</b>	<b>Day trippers</b>	<b>Average stay (nights)</b>	<b>Geese as an Attraction</b>
Loch Gruinart, Islay	6,500	2,600	2,470	130	7	Main
Vane Farm (Tayside)	56,000	40,000	9,600	10,400	3	Important
Strathbeg/ Grampian	11,000	7,150	715	3,215	2	Important
Caerlaverock (D&G)	16,000	12,000	3,000	8,400	2	Main
Mersehead (D&G)	2,500*	1,500*	825	525	2	Important
Ken/Dee Marshes (D&G)	3,000	1,500	600	825	2	Main
Udale Bay	4,000	2,000	500	500	2	Important
Montrose Basin (Tayside)	12,225	5,044	?	?	?	Important

\* Visitor numbers at Mersehead are expected to increase rapidly in the near future, following the opening of the new reserve visitor centre.

There are likely to be overlaps between visitors to these key sites. For example, many visitors staying in Dumfries and Galloway are likely to take in more than one of the three reserves in the table, and the same appears to be true in Grampian. Therefore it is necessary to treat staying visitors on an area rather than reserve basis. A conservative assumption would be that the number of staying visitors in the area is equivalent to those visiting the most popular reserve (ie. in Dumfries and Galloway, the Caerlaverock figure of 8,400 staying visitors would be used, which assumes that all staying visitors to Mersehead and Ken and Dee Marshes also visit Caerlaverock).

### ***Estimated Visitor Expenditure***

These figures have been used to estimate expenditures in local economies. We have used estimates of daily visitor expenditures similar to those for coastal wildfowling (see Section 6). The following assumptions were employed:

- Staying visitors spend an average of £25 per day on accommodation and £15 per day on other items in the local area;
- Day trippers spend an average of £10 per day in the local area;
- 50% of all spending can be attributed to the presence of geese. Geese are an important attraction at all of these reserves, but visitors are also likely to be interested in other species. On Islay, geese are the main bird attraction but winter holidaymakers visiting the reserve are also likely to have other reasons for visiting the island.

Using these assumptions, it is estimated that winter visitors to key goose sites in Scotland spend approximately £3.0 million per year in local economies, and that expenditures totalling £1.5 million can be attributed to the presence of geese themselves (Table 26).

**Table 26: Estimated Expenditures Attributable to Geese**

Site/Area	No. of Holiday visitors	Average stay (nights)	Estimated spend (at £40 per day)	No. of Day trippers	Estimated spend (at £10/day)	Total spend (£)	Total spend attributed to geese (£)
Islay	2,470	7	691,600	130	1,300	692,900	346,450
Vane Farm	9,600	3	1,152,000	10,400	104,000	1,256,000	628,000
Dumfries and Galloway	12,000	2	960,000	4,425	44,250	1,004,250	502,125
Grampian	715	2	57,200	3,215	32,150	89,350	44,675
Udale Bay	500	2	40,000	500	5,000	45,000	22,500
<b>Total</b>	<b>25,285</b>		<b>2,900,800</b>	<b>18,670</b>	<b>186,700</b>	<b>3,087,500</b>	<b>1,543,750</b>

The figure of £346,000 for Islay compares with the estimate of £269,000 in section 3, calculated by adjusting figures from the 1988 Islay visitor survey by the Retail Price Index, and the estimate of £310,000 derived by Marston (1998, see section 8).

## 8. Survey of Islay Tourism Businesses by Andrew Marston

### *Introduction*

A survey of tourism businesses on Islay was undertaken in summer 1998 by Andrew Marston, as part of his Masters of Land Economy dissertation at Aberdeen University (Marston, 1998).

Marston interviewed a total of 53 providers of accommodation on Islay, running a total of 72 establishments. These included 43 self catering units and 29 hotels and B&Bs. These establishments had a total capacity for 488 staying guests.

### *Occupancy Rates*

Occupancy rates are set out in Table 27.

**Table 27: Occupancy Rates for Accommodation on Islay**

Month	Occupancy Rate
October-December	20%
January-March	13%
April-June	75%
July-September	77%
<b>Average</b>	<b>46%</b>

As expected, occupancy rates are generally much lower in winter than in summer, but are well above zero.

### ***Lengths of Stay***

The majority of visitors, in winter as well as summer, stay for one week. The next most popular trip is a 2-4 day short break. Only 8% of the providers interviewed close during the winter months.

**Table 28: Average Lengths of Stay for visitors to Islay**

	<b>Winter</b>	<b>Summer</b>
One night	8%	6%
2-4 nights	32%	32%
One week	43%	49%
Two weeks	9%	13%
More than 2 weeks	0%	0%
Closed	8%	-

### ***Wildlife Attractions***

The survey found that:

- 79% of interviewees considered that most guests visited the RSPB reserve at Loch Gruinart;
- 60% of interviewees considered that most guests had visited Islay Natural History Trust Field Centre in Port Charlotte;
- 81% of interviewees used birds or wildlife in their promotional material;
- 26% specifically mentioned geese in their promotional material;
- 30% mentioned the RSPB reserve in their promotional material;
- 8% mentioned the Natural History Centre in their promotional material;
- a number of respondents advertised in RSPB “Birds” magazine or “Birdwatching” magazine.

### ***Estimated Expenditures***

Marston went on to estimate expenditures by visitors to Loch Gruinart RSPB reserve, based on the following:

- visitors total 5964 per year, based on 5 year mean of 1993-97, with 32% visiting during the months when geese are present;
- average length of stay is 5.7 nights;
- estimated expenditures of £28.60 per day, derived from the £20 figure used in the 1989 MacKay study, adjusted for inflation.

Using these figures, Marston estimated that visitors to the reserve spend £972,000 per annum on Islay, of which £311,000 is spent during the months when geese are present.

## **9. Analysis: Impact of Geese on Local Economies in Scotland**

### ***Summary of Visitor Expenditures***

Table 30 summarises the estimates of visitor expenditure from sections 5,6 and 7. They indicate that visiting goose watchers and shooters spend £5.4 million per year in Scotland, and that around £3.7 million of this can be attributed to the presence of geese. It is important to note,

when comparing these expenditure estimates, that they have been calculated using slightly different methods and assumptions.

**Table 30: Summary of Visitor Expenditures**

	<b>Total expenditures (£m)</b>	<b>Expenditures Attributed to Geese (£m)</b>
Goose watchers	3.09	1.54
Inland goose shooters	2.09	1.95
Coastal wildfowlers	0.18	0.18
<b>Total</b>	<b>5.36</b>	<b>3.67</b>

These expenditures are by non local visitors, and therefore provide extra revenues for local economies in Scotland. Around 99% of expenditures by inland goose shooters, 95% by coastal wildfowlers and an unknown proportion of spending by bird watchers comes from non Scottish visitors, and therefore provides an injection of money into the Scottish economy as a whole.

### ***Estimating the Economic Impact***

In order to estimate the impact of these expenditures, it is possible to use income and expenditure multipliers. The most recent and comprehensive multipliers available were developed in the Scottish Tourism Multiplier Study by Surrey Research Group (1992). These are now looking somewhat dated. However, according to HIE, they are the best tourism multipliers currently available for Scotland, providing they are adjusted for inflation where necessary. The “rural” model developed in this study is designed to apply to a range of rural areas in Scotland. The multipliers estimated under this model are presented in Table 31.

**Table 31: Employment and Income Multipliers for Scottish Rural Areas**

	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
Employment multiplier: expenditure per FTE job (1991)	£37,175	£434,783	£200,000	£29,240
Employment multiplier at 1997 prices, adjusted by RPI	£44,029	£514,949	£236,876	£34,631
Income multiplier: ratio of income to expenditure	0.2410	0.0297	0.0361	0.3068

The employment multiplier indicates the expenditure required to support one full-time equivalent job. In 1991, £37,175 of spending was, on average, required to generate one direct job in rural areas, with further, but fewer, jobs created as a result of indirect and induced effects. In total, taking account of direct, indirect and induced employment, an average of £29,240 of expenditure was required to support one FTE job. The retail price index increased by 18% between 1991 and 1997. Increasing the employment multipliers for rural areas in line with the RPI gives a multiplier of £34,631 of expenditure required to support one full time equivalent job in the local economy. This takes account of direct, indirect and induced effects.

The income multiplier calculates the income, in terms of wages, salaries, profits and rents which arises from each £ of expenditure in the local economy, taking account of multiplier effects and leakages from the local economy. It is gross of tax, national insurance and pension contributions but net of payments to people and companies outside the local economy. This indicates that each £1 of visitor spending in rural areas provides £0.24 of direct, £0.03 of indirect and £0.04 of induced income in the local economy, giving a total income of £0.3068. As a ratio rather than a monetary amount, this multiplier of 0.3 can be assumed to be unaffected by

general inflation. Therefore it is likely to be relatively stable over time, and is the best estimate of the current income multiplier in Scottish rural areas.

### ***Estimated Economic Impact of Goose Related Expenditures in Scotland***

Using these multipliers, it is possible to estimate the employment and income resulting from goose watching and goose shooting in Scotland. Employment estimates were derived by dividing the expenditure estimates by the employment multiplier (£34,631 expenditure required to support 1FTE job). The income estimates were derived by multiplying the expenditure estimates by the income multiplier of 0.3.

In total, we estimate that the £1.54 million annual expenditure attributable to goose watching supports 44 FTE jobs and £462,000 of local income. Inland goose shooting is estimated to support 56 FTE jobs and £585,000 of income, while coastal wildfowling is estimated to support 5 FTE jobs and £54,000 of income (Table 32).

**Table 32: Estimated Economic Impact of Goose Related Tourism in Scotland**

	<b>Expenditure (£m)</b>	<b>Employment (FTE jobs)</b>	<b>Income (£000)</b>
Goose watching	1.54	44.4	462
Inland goose shooting	1.95	56.3	585
Coastal wildfowling	0.18	5.2	54
<b>Totals</b>	<b>3.67</b>	<b>105.9</b>	<b>1101</b>

In total, through birdwatching and shooting, we estimate that geese attract expenditures totalling £3.7 million into local economies in Scotland, supporting 106 FTE jobs and providing income of £1.1 million to local people.

## **10. Conclusions**

This report demonstrates that, as well as causing damage to agriculture, geese also bring significant benefits to rural economies in Scotland by attracting winter tourism by bird watchers and shooters. These economic benefits are likely to be significant in comparison to estimates of the damage caused by goose grazing. For example, on Islay, where goose grazing is seen as being particularly damaging to the agricultural economy, SNH has estimated that it reduces farmers' gross margins by between £336,973 and £787,733 per year outside the SSSI area. Our estimates suggest that goose watching brings expenditures of between £269,000 and £346,000 to Islay's economy. While these figures are not strictly comparable, they suggest that any economic assessment which ignores the benefits of geese through tourism could seriously overstate the net damage geese are causing to the economy as a whole.

While farmers suffer income losses from goose grazing, the economic benefits are usually enjoyed by the wider rural economy - such as providers of accommodation, food and drink, transport and other services. Most farmers find it impractical to charge visitors for access to the countryside to view wildlife, even in areas where goose watching is most popular, such as Islay and the Solway. Moreover, though many farmers do gain revenues from allowing people to shoot geese on their land, these do not necessarily reflect the costs which individual farmers incur as a result of goose grazing. As a result, the benefits which geese bring to local economies are often not captured by those who bear the burden of the costs. This market failure supports



the case for intervention to ensure that farmers are rewarded appropriately for managing their land in a way which supports healthy goose populations.

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**Appendix 1: Letter sent to Tourist Boards and LECs by RSPB**

## **Appendix 2: Survey of Tourist Boards and LECs**

### ***Survey of Tourist Boards***

We wrote to the Scottish Tourist Board and area tourist boards to ask them for any information they had about the importance of geese for tourism and shooting. A copy of the letter is included in Appendix 1.

We received 9 replies from tourist boards. These are summarised as follows.

#### *Scottish Tourist Board*

The recently reprinted STB publication “Wild Scotland” included photographs of both greylag and barnacle geese, with associated references to various geographical locations. A 1997 publication, “Autumn Gold”, contained photographs of whooper swans and references to Vane Farm and the Loch of Strathbeg.

STB noted that several Area Tourist Boards, including Dumfries and Galloway, Aberdeen and Grampian, Islay, HOST and Perthshire specifically highlight geese as part of their overall package of wildlife visitor attractions. STB explained that both they, and several of the ATBs, recognise the value of geese as a niche marketing resource, and that they could possibly develop this further through CCTV, additional hides etc. Viewing of wildlife - and particularly geese - could assist in the STB policy aims of extending the tourism season and of visitor dispersal - with Islay, Strathbeg and Caerlaverock identified as key sites. STB also pointed to several relevant reports relating to both shooting and wildlife tourism in Scotland, of which we were already aware.

#### *Angus and Dundee*

The Tourist Board had no information on the subject.

#### *Argyll, the Isles, Loch Lomond, Stirling and the Trossachs*

Wildlife tourism generally is of interest to a number of visitors. According to the Kintyre Visitor Survey, 9% of holidaymakers in the area planned to undertake some form of field/nature study during their stay. More specifically, geese bring economic benefits to the tourism industry on Islay in the autumn and winter, boosting performance at what might otherwise be a quiet time of year and helping to address the issue of seasonality. The presence of geese is featured in their visitor guide to Islay.

#### *Ayrshire and Annan*

The Tourist Board considers that geese have no meaningful impact on the local economy, because of their relatively low populations compared to other parts of Scotland. The wintering population is around 2,000 greylags and 200 pinkfeet.

#### *Dumfries and Galloway*

The Tourist Board has no specific information about the importance of geese for tourism in the area, but pointed out that:

- Caerlaverock WWT Reserve, Threave Wildfowl Reserve (National Trust for Scotland), Loch Ken RSPB Reserve and Mersehead RSPB Reserve are the most frequented sites by visitors in search of wild geese in Dumfries and Galloway;
- The Tourist Board’s guide, “Birdwatching in Dumfries and Galloway” highlights these sites, as well as others in the west of the Region;
- The Tourist Board is conscious of the potential of birdwatching to attract visitors, particularly outwith the main summer months, and is proposing to include it as one of a number of activity sectors to be targeted for promotional purposes over the next 12 months.

### *Fife*

The Tourist Board has no knowledge of any benefits or problems which wild geese bring to Fife. Loch Leven, which borders the Tourist Board area, is the major location for goose watching in that part of Scotland, but most visitors seem to use sites outside their area, notably Vane Farm RSPB reserve.

### *Highlands of Scotland Tourism*

HOST has no survey information about the importance of geese to visitors to its area.

### *Orkney*

Orkney supports a small wintering population of barnacle geese. Although a visitor survey was conducted in 1996, and found that 11% of visitors to Orkney identified birds, wildlife and nature reserves as the main reason for visiting the islands, no specific information is available about whether geese are an attraction for visitors.

### *Western Isles*

The Tourist Board has no specific information about geese. However, it pointed out that 1998 is the Year of Wildlife in the Western Isles, in which various events have been arranged to raise awareness of landscape, wildlife, marine life etc. Birds are a major visitor attraction in the Western Isles, with a visitor survey in 1997 finding that 50% of visitors to Tourism Information Centres throughout the Islands participated in birdwatching. This information refers to birds in general, not only to geese.

## ***Survey of Local Enterprise Companies***

We wrote to Scottish Enterprise, Highlands and Islands Enterprise and LECs and Development Agencies to ask them for any information they had about the importance of geese for tourism and shooting. A copy of the letter is attached in Appendix 1.

We received 14 replies from LECs and development agencies. These are summarised as follows:

### *Scottish Enterprise*

Scottish Enterprise had no information on the economic impacts of wild geese.

### *Highlands and Islands Enterprise*

No specific information is available, particularly of a quantitative nature, highlighting the need for a socio-economic impact assessment on this subject. However, a study 3-4 years ago into the feasibility and desirability of a Local Nature Reserve on the Beaully Firth highlighted the importance of goose shooting to hoteliers during the winter months.

### *Argyll and the Islands Enterprise*

The LEC recognises the central importance of wildlife and the natural heritage to tourism in Argyll and the Islands. On Islay, the subject is not without controversy, but their interest is with sustainable tourism development at a very local level. There is a shortage of detailed information, but visitor surveys indicate that the rural environment is a major attraction; that wildlife sites are well used and in demand where access and interpretation is provided; and that a high proportion of visitors intend to return. A large proportion of birdwatchers who appear, for example, on Islay, do so, in part, due to the presence of geese. More locally the wintering of geese on the Moss at Crinan is a popular attraction due to access and visibility from a minor road.

#### *Caithness and Sutherland Enterprise*

CASE has little direct experience of the impact of geese on the local economy. However, numerous Caithness operators attract UK and foreign based shooters in the autumn months, and this is seen as a valuable source of income for both estates and accommodation providers.

More generally, wildlife is considered to important for the local tourism industry. A recent visitor survey found that 7% of visitors to Caithness and Sutherland gave wildlife, nature or flora and fauna as their main reason for visiting the area.

#### *Dumfries and Galloway Enterprise*

DGE recognises the many direct and indirect economic benefits which native wildlife can bring. Direct benefits include the popularity of Caerlaverock Visitor Centre and the many countryside pursuits that take place, such as organised shoots and countryside walks. Indirect benefits include greater public awareness the diverse natural environment, enhancing the overall quality of life for both resident and visitor. DGE has no specific information on the subject of geese and local economies, but recognises the importance of the study.

#### *Fife Enterprise*

Fife Enterprise considered that the economic impact of geese, through wildlife tourism and shooting, was likely to be limited in Fife. They made the following points:

- sporting shooting is a minor element of the overall tourism product in Fife. A recent study of activity holiday provision in Fife found that field sports had low potential for visitor growth, were elitist, but were increasingly popular with the corporate day market;
- the LEC's efforts in the activity holiday market are focused on other areas. A number of operators offer shooting as part of outdoor packages but only one, Richardson Shooting, specifically mentions geese;
- the only other visitor attractions involving geese are nature reserves such as Birnie Loch, or farm based attractions, which might include geese as part of a broader attraction.

#### *Glasgow Development Agency*

GDA covers the city of Glasgow, and as such geese are not an issue.

#### *Grampian Enterprise*

Grampian Enterprise has no information about geese and the local economy.

#### *Inverness and Nairn Enterprise*

The LEC is aware of damage caused by geese to agriculture in Scotland, but has no information about positive benefits to tourism.

#### *Lothian Business Shop*

The Business Shop does not hold information on the importance of geese to the local economy.

#### *Lanarkshire Development Agency*

The Development Agency does not hold information on the importance of geese to the local economy.

#### *Shetland Enterprise*

The 1995 Shetland Visitor Survey found that 26% of holiday visitors identified birdlife as the main attraction for them in deciding to visit Shetland. However, there are relatively small

numbers of geese on Shetland and by themselves they make no major contribution to the tourism industry. There is no commercial shooting on Shetland but wildfowling is carried out by local people on a very small scale.

*Skye and Lochalsh Enterprise*

The information available on this subject is extremely small and limited to the anecdotal. The main area where they have heard comment is in regard to the negative effects geese can have on shellfish farms, although no economic data is available. More positively, wildlife holidays and other forms of outdoor activity are a growing feature of the tourism industry in Skye and Lochalsh. The impact of geese on the growth of this sector is unquantifiable.

*Western Isles Enterprise*

Western Isles Enterprise had no information on geese and local economies, other than to point out that 1998 is the Western Isles Year of Wildlife.

***Conclusions from Tourist Board and LEC Responses***

The survey of LECs and tourist boards has provided little new information, and is not of much assistance in helping to quantify the impact of goose related tourism on local economies in Scotland. However, many of the responses revealed a general recognition that geese are of significant benefit to the tourism industry in parts of Scotland, most notably Argyll and the Islands and Dumfries and Galloway. In several other parts of Scotland, the economic importance of wildlife tourism in general was highlighted. The survey indicates that the importance of wildlife, and specifically geese, to the tourism industry is recognised not only by conservationists but also by tourist boards and Local Enterprise Companies.

### **Appendix 3: Questionnaire sent to goose guides by BASC**



**Appendix 4: Questionnaire sent to reserve wardens/site managers by RSPB**